



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/809,306

03/24/2004

Wenman Li

ye-pt005

6529

28394

7590

03/21/2007

KAO H. LU

686 LAWSON AVE

HAVERTOWN, PA 19083

EXAMINER

HODGE, ROBERT W

ART UNIT

PAPER NUMBER

1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

03/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/809,306	LI, WENMAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Robert Hodge	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: In paragraphs [0002] and [0006] of applicant's specification the term "plumbous acid" is used. It appears to the Examiner that applicant meant to recite, "lead acid".

Appropriate correction is required.

### ***Claim Objections***

Claim 5 is objected to because of the following informalities: Claim 5 recites the limitation of a "plumbous acid battery". It appears to the Examiner that applicant meant to recite, "lead acid battery". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pre-Grant Publication No. 2003/0162084 hereinafter Shigeta.

Art Unit: 1745

Shigeta teaches a battery array with a cooling system comprising an outer case 10, with two opposing sides 11 and 12, having arrays of ventilation holes 15, a second cooling plate 31 having rows of air holes 33, that communicate with the ventilation holes 15, individual batteries that are connected in series and/or parallel (paragraph [0025]), said battery array further comprising at least one fan (paragraph [0034]), at least one temperature sensor 50 and a temperature control circuit 60 (paragraph [0057]) and the individual batteries can have different chemistries such as nickel-hydrogen, lithium ion and nickel-cadmium (see also figures 1 and 2 and paragraphs [0007], [0011], [0025], [0026], [0028], [0029], [0034], [0054] and [0057]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1; 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 and 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Shigeta.

Shigeta as discussed above is incorporated herein.

Shigeta does not specifically mention the claimed range or the size of the hole or the claimed construction that the second plate with holes is metal, but modifying the construction and the size of the ventilation/air holes would have been obvious at the time of applicant's invention because the use of preferred materials and the optimum workable ranges discovered by routine experimentation is ordinarily within the skill of the art. Further it would have been obvious to modify the construction and/or size of the ventilation/air holes because the applicant has not disclosed that having the specific construction or size of the ventilation/air holes solves any stated problem or is for any particular purpose (see paragraph [0014] of the specification) and/or it appears that the device of Shigeta would perform equally well with any well known material in the art. Therefore it would have been well within the skill of one of ordinary skill in the art at the time the invention was made to vary the size of the ventilation/air holes and/or the construction to achieve the desired properties such as properly ventilating the battery pack to remove enough heat by using properly sized holes and using metal which is known for its conductive properties to conduct the heat away from the batteries further keeping the battery pack at its optimal operating temperature, and because it is within the general skill of a worker in the art to select known construction on the basis of its suitability. See *In re Rose*, 105 USPQ 237 (CCPA 1955), *Concrete Unlimited Inc. v.*

Art Unit: 1745

Cementcraft Inc. 227 USPQ 784 (Fed. Cir. 1985) and In re Kuhle 188 USPQ 7 (CCPA 1975).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Hodge whose telephone number is (571) 272-2097. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RWH

  
**JONATHAN CREPEAU**  
**PRIMARY EXAMINER**